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(54) Title: AZIMUTHAL DRIVING SYSTEM FOR WIND TURBINES

(54) Bezeichnung: AZIMUTANTRIEB FÜR WINDENERGIEANLAGEN

(57) Abstract

Wind turbines are generally provided with an active driving system for orienting them according to the wind direction. This driving system rotates the wind–turbine nacelle so that the rotor blades are oriented in the wind direction. The driving system used for this orientation generally consists of an azimuthal driving system which is arranged together with the corresponding azimuthal bearings between the top of the tower and the nacelle. In small–size wind turbines, an adjustable driving system is sufficient, while larger wind turbines are provided with a plurality of azimuthal driving systems. The purpose of the present invention is to improve the azimuthal driving system for wind turbines in order to create an azimuthal driving system having a simple structure, to ensure a regular load distribution for each azimuthal driving system and to avoid unwanted torque variation in individual driving systems. This invention essentially relates to a wind turbine comprising a nacelle having a rotor with at least one blade arranged therein, wherein said wind turbine also includes an unit for displacing the nacelle in order to place the rotor in a desired orientation in the wind direction. The driving member of this displacement unit consists of a three–phase asynchronous motor which is supplied with a three–phase current in order to displace the nacelle and which is partially or completely supplied with a direct current during the nacelle inactive period.